PB90-120759

SUPERFUND RECORD OF DECISION
BYRON SALVAGE YARD, IL
THIRD REMEDIAL ACTION

(U.S.) Environmental Protection Agency
Washington, DC

Jun 89

U.S. Department of Commerce
National Technical Information Service
NTIS

United States
Environmental Protection
Agency

Office of
Emergency and
Remedial Response

EPA/ROD/R05-89/089
June 1989

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EPA

Superfund Record of Decision:

Byron Salvage Yard, IL

REPRODUCED BY
U.S. DEPARTMENT OF COMMERCE
NATIONAL TECHNICAL INFORMATION SERVICE
SPRINGFIELD, VA. 22161

50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. EPA/ROD/R05-89/089	2.	3. Recipient's Accession No.

4. Title and Subtitle
SUPERFUND RECORD OF DECISION
Byron Salvage Yard, IL
Third Remedial Action

5. Report Date 6/30/89

6.

7. Author(s)

8. Performing Organization Rept. No.

9. Performing Organization Name and Address

10. Project/Task/Work Unit No.

11. Contract(C) or Grant(G) No.
(C)
(G)

12. Sponsoring Organization Name and Address
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

13. Type of Report & Period Covered
800/000

14.

15. Supplementary Notes

16. Abstract (Limit: 200 words)

The Byron Salvage Yard site is in rural Ogle County, Illinois and is approximately 3 miles southwest of the city of Byron. The site, which includes the Byron Salvage Yard and Dirk's Farm, is bordered by a forest preserve district to the north, an operating nuclear plant to the southeast, residential property to the south, and an open field to the west. The site is bisected by two 15 to 30 feet deep ravines draining surface water runoff through the ravine waterways to the south branch of Woodland Creek, which flows to the Rock River. During the 1960s the salvage yard owner accepted miscellaneous wastes and debris for disposal including drums of electroplating wastes, oil sludges, cutting wheels, solvents, and scrap metal. Industrial waste dumping reportedly occurred on the site during periods of heavy rainfall so that most of the waste would be carried offsite by the resulting surface water runoff. In 1976 the Illinois EPA documented the presence of cyanide and heavy metals in soil, surface water, and ground water in and around the site. In 1986 the State initiated cleanup activities which included excavating buried drums from the ravines; removing surface drums; excavating soil heavily contaminated by heavy metals or organics; and excavating soil with concentrations 100 mg/kg or greater of cyanide. In situ treatment of cyanide-contaminated soil less than 100 mg/kg was performed but low levels of cyanide still remain. Water quality sampling, performed in 1984, revealed that offsite ground
(See Attached Sheet)

17. Document Analysis a. Descriptors
Record of Decision - Byron Salvage Yard, IL
Third Remedial Action
Contaminated Media: gw
Key Contaminants: VOCs (benzene, PCE, TCE); metals (arsenic, chromium, lead); cyanide

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement	19. Security Class (This Report) None	21. No. of Pages
	20. Security Class (This Page) None	22. Price

(See ANSI-Z39.18) *See Instructions on Reverse*

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

EPA/ROD/R05-89/089
Byron Salvage Yard, IL
Third Remedial Action

16. Abstract (Continued)

water was contaminated with VOCs, primarily TCE. The two aquifers which underlie and surround the site contain elevated levels of VOCs, metals, and cyanide. Private residential water supply wells that were affected by the contaminated ground water were temporarily supplied with bottled drinking water. In 1986 an EPA-approved emergency action led to the installation of in-house carbon filtration units at ten residences in the Rock River Terrace subdivision located a 1/2 mile northwest of the site. A 1986 State Record of Decision extended the municipal water supply system from Byron to the Rock River Terrace subdivision. This operable unit addresses the ground water contamination emanating from the site and is the third of four operable units. The primary contaminants affecting the ground water are VOCs including benzene, PCE, and TCE; metals including arsenic, chromium, and lead; and cyanide.

The selected remedial action for this site includes removing all wastes generated during the remedial investigation; adding a one-foot soil cover to the affected portions of the site and regrading and revegetating the new surface; monitoring surface and ground water; plugging and abandoning monitoring wells no longer in use; providing an alternate source of drinking water by extending the water main of the municipal system to 27 additional residences; and implementing institutional controls. The estimated present worth cost is $1,100,000, which includes annual O&M costs of $16,000.

* Institutional controls (including such things as deed restrictions or mandatory hook-ups to available public water supplies), plugging and abandoning residential wells, and/or other such actions which will provide enforceable measures that will preclude human exposure to the contaminated groundwater at any point between the site boundary and all known and projected points of entry of such groundwater into surface water.

DECLARATION

The selected remedy is protective of human health and the environment and is cost-effective. The action attains Federal and State requirements that are applicable, or relevant and appropriate, to this action. This remedy uses permanent remedies or alternative treatment technologies to the maximum extent practicable. Because of the applicability of alternate concentration limits, the availability of a municipal water supply, the proximity of a river to which the contaminated aquifers discharge without significant impact, the fractured nature of the contaminated aquifers, and the spread of contamination already between the site and the river, additional treatment of the source of contamination (beyond the surface and subsurface removal and product-layer extraction) by groundwater extraction would not be sufficient or practicable compared to providing potable water to residences between the site and river in the area of this site. This operable unit, therefore, does not satisfy the statutory preference for treatment as a principal element of the remedy. If institutional controls, which are the enforceable measures which will preclude human exposure to contaminated groundwater at any point between the facility boundary and all known and projected points of entry of such groundwater into the surface water, are not successfully implemented by the time the alternate water supply is fully installed and operational, then the U.S. EPA will reconsider the Record of Decision (ROD), and amend the ROD as necessary so that the remedy comports with the cleanup standards of CERCLA Section 121.

As this remedy will result in hazardous substances remaining at the site, a review will be conducted no less often than every 5 years after initiation of the remedial action to assure that human health and the environment are being protected.

June 30, 1989
Date

Valdas V. Adamkus
Regional Administrator
Region V

DECLARATION FOR THE RECORD OF DECISION

SITE NAME AND LOCATION

Byron Salvage Yard
Byron, Illinois

STATEMENT OF BASIS AND PURPOSE

This decision document represents the selected remedial action for an operable unit addressing groundwater contamination at the Byron Johnson Salvage Yard National Priorities List (NPL) site (the site) developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by Superfund Amendments and Reauthorization Act of 1986 (SARA), and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

This decision is based on the contents of the administrative record for the Byron Salvage Yard site. The attached index identifies the items which comprise the administrative record upon which the selection of the remedial action is based.

The State of Illinois is expected to concur with the selected remedy.

DESCRIPTION OF THE REMEDY

The function of this operable unit is to address the groundwater contamination emanating from the Byron Salvage Yard Site.

The major components of the selected remedy include:

* Extending the Byron Municipal water supply system to residents of an additional 27 residences currently in danger of ingesting contaminated groundwater.

* Removing all wastes from the Byron Salvage Yard portion of the site generated during the Remedial Investigation (RI) conducted by the U.S. EPA.

* Installing, sampling, and analyzing additional compliance monitoring wells at or near the Rock River.

* Performing surface water, residential well, and monitoring-well sampling and analysis on a long-term basis.

* Plugging and abandoning monitoring wells not selected for long-term monitoring.

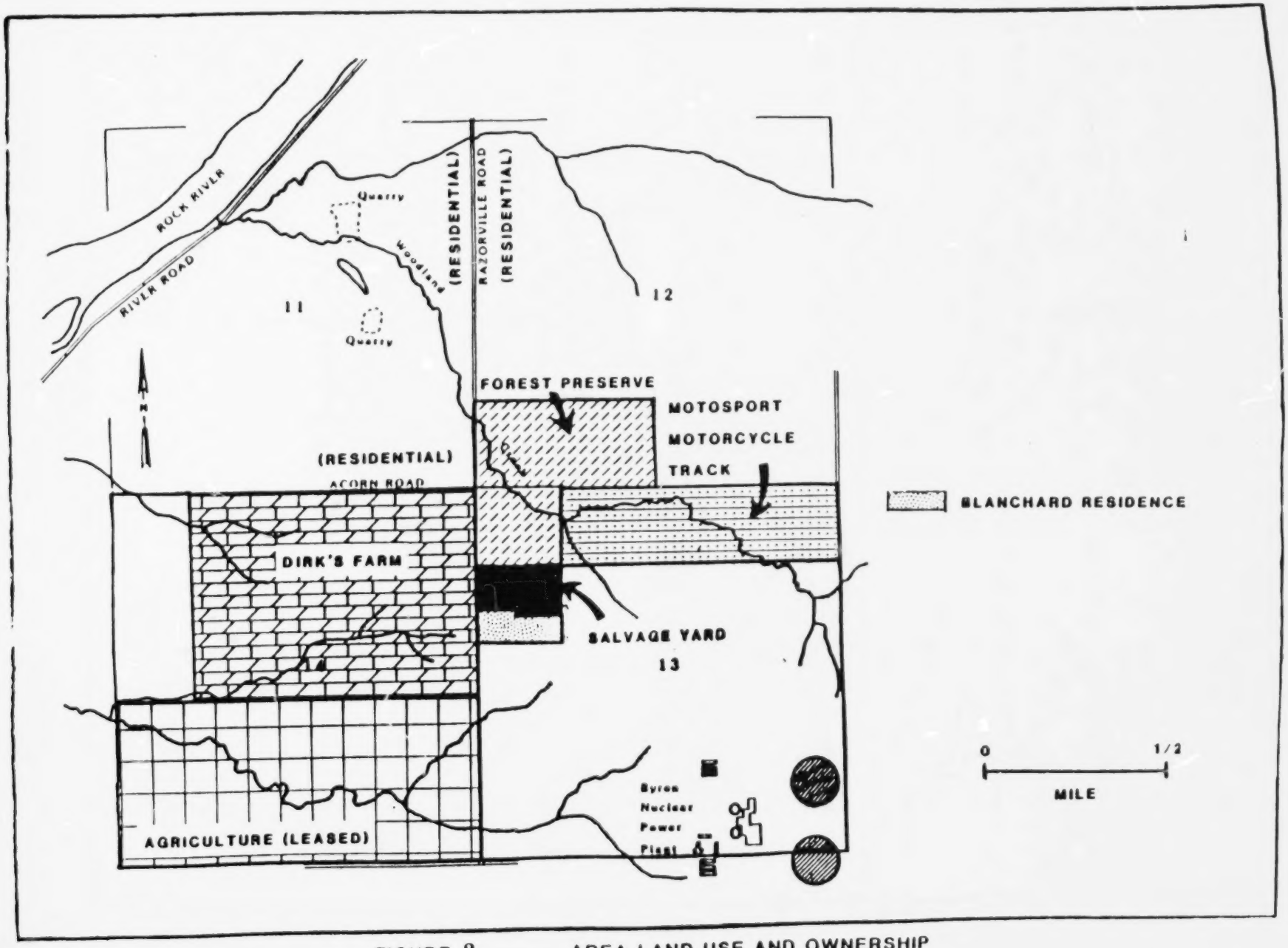
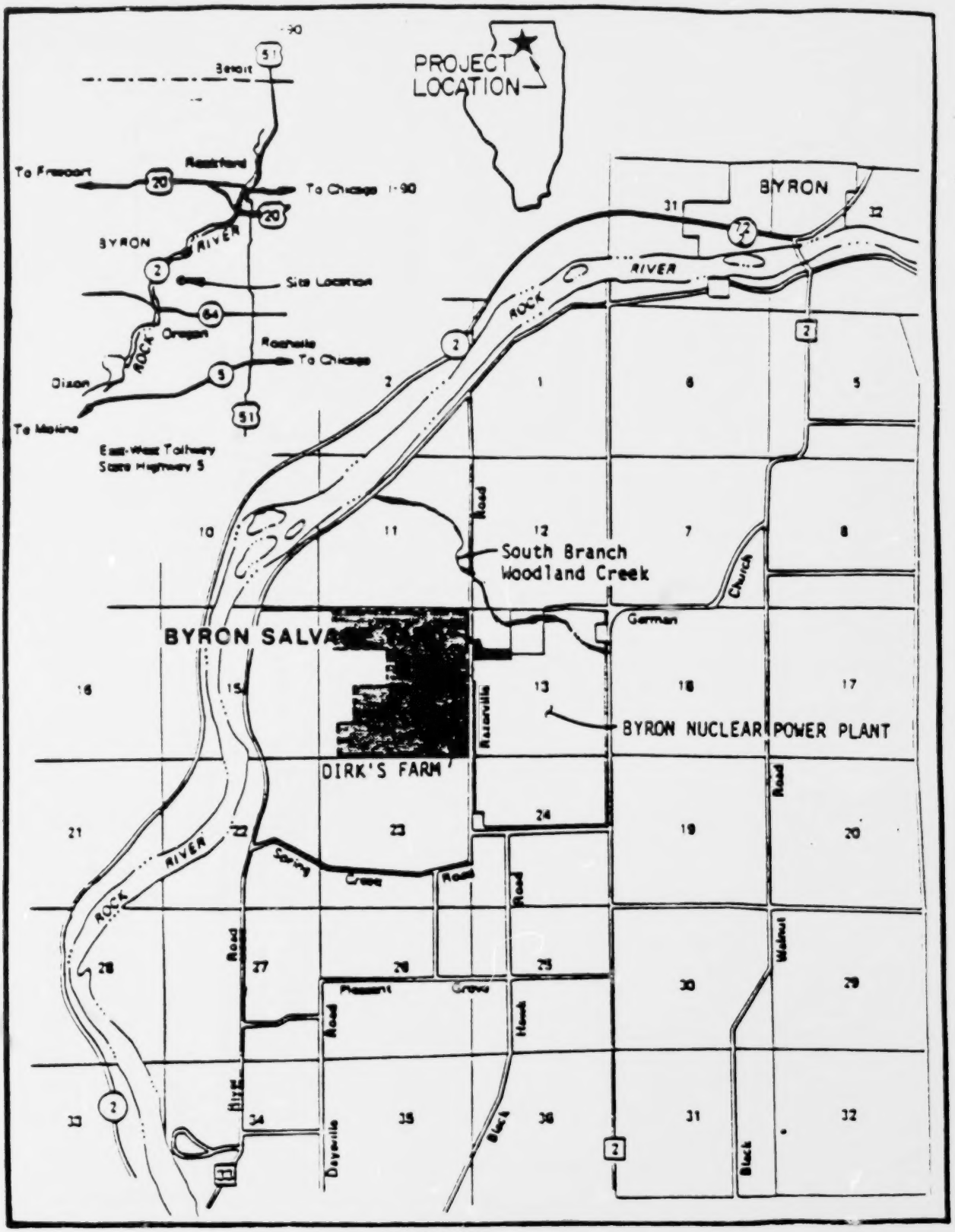


FIGURE 2 AREA LAND USE AND OWNERSHIP



north

SCALE: 1" = 4500'

FIGURE 1

LOCATION OF
BYRON JOHNSON
SALVAGE YARD

RECORD OF DECISION SUMMARY

BYRON SALVAGE YARD

I. SITE NAME, LOCATION AND DESCRIPTION

The Byron Superfund Site consists of two areas: The Byron Salvage Yard and Dirk's Farm. Both are located in rural Ogle County in Northern Illinois, about half-way between the cities of Byron and Oregon, Illinois (Figure 1). The Salvage Yard is located east of Razorville Road in the southwest quarter of the northwest quarter of Section 13, Township 24 North, Range 10 East (Figure 2). Relative to the Salvage Yard, the Byron corporate limit is approximately three miles to the northeast and the Oregon corporate limit is approximately five miles to the southwest.

Contiguous with the site boundaries to the northeast is Motosport Park, which is used for motorcycle riding. Motosport is owned and operated by Joe Vincer. The property adjacent to the southern boundary is owned and inhabitated by the Amos Blanchard family.

Commonwealth Edison Company (CECo) owns the properties immediately north, southeast, and west of the Salvage Yard:

* 80 acres north of the Salvage Yard are leased to the Byron Forest Preserve District;

* To the southeast is the CECo owned and operated Byron Nuclear Power Plant;

* To the west, across Razorville Road is an open field that was previously the Dirk's Farm property. This property is currently owned by CECo.

The site is located along the upland portion of the Rock River Valley. The geography is dominated by bedrock erosional features, which have been modified by glaciation. The area in the immediate vicinity of the Rock River is characterized by moderate relief due to steeply incised stream and river valleys. The upland areas not affected by the Rock River consist of broad, relatively flat plains. The site is situated at the intersection of these two topographical environments.

Specifically, the site is bisected by two ravines (the west waterway and the south waterway) that are approximately 15 to 30 feet deep. The ravines drain surface water runoff from the site through the ravine waterways to the south branch of Woodland Creek. The south branch of Woodland Creek is an intermittent stream to the north of the site which flows northwestward to Woodland Creek and then to the Rock River about two miles away. Most of the site slopes gently to the north toward the south branch of Woodland Creek.

Surface elevations at the site range from 740 and 860 feet above mean sea level (MSL).

The site has small trees, brush, and ground cover typical of old field plant communities. All main roads at the site have been covered with gravel obtained from outside the Salvage Yard. Other, secondary roads at the site are dirt and lead to areas of the site previously used for dumping.

Several structures are present on the site: an abandoned house located on the western edge of the site along Razorville Road; a collapsed water well located approximately five yards north of the house; two barn-like sheds and a small metal shed just inside the north entrance to the site; and a small trailer about 100 yards inside the south entrance to the site.

II. SITE HISTORY AND ENFORCEMENT ACTIVITIES

In the 1960's, the Salvage Yard was operated by Mr. Johnson as a junk yard where miscellaneous wastes and debris were brought for disposal. Some of the waste materials were salvaged for resale. Drums of electroplating wastes and other materials (oil sludges, cutting wheels, solvents, and scrap metal) were also disposed of at the Salvage Yard. It was reported in previous studies (IEPA 1976 and 1984) that the contents of the drums found on site were:

* Pumped out by an oil/chemical salvage company and taken offsite;
* Dumped on the ground in the vicinity of the ravines draining to the north;
* Sprayed on nearby dirt roads and on-site for dust control; or
* Left in drums, some of which later corroded, allowing their contents to leak out.

Dumping of industrial wastes directly on the ground was reportedly performed at times of heavy rainfall so that a majority of the waste would be carried off the site by the resulting surface water run-off.

Similar dumping practices were also carried out during this time at the Dirk's Farm portion of the site.

Reports by the IEPA (1976) and D'Appolonia Waste Management Services (1984) documented the presence of cyanide and heavy metals in soils, surface water, and groundwater in and around the site since 1976.

Under a cooperative agreement with the U.S. EPA, the IEPA performed a state-lead Remedial Investigation/Feasibility Study (RI/FS) at the Salvage

Yard in May, 1983. The RI included installation of six shallow monitoring wells on site, and collection of groundwater, soil, and sediment samples for chemical analyses. Analytical results indicated that groundwater, soils, and sediments on the site were contaminated with cyanide, heavy metals, and organics. Contents of exposed drums were also sampled and inventoried. A ground penetrating radar study which was performed helped to locate areas of buried drums.

The IEPA reports were issued in June, 1984. The Feasibility Study focused on the removal and/or containment of containerized waste near the surface and waste buried in ravines on the site. Based upon the results of the RI/FS activities, a Record of Decision (ROD) was signed specifying the removal of buried and surface drums and heavily contaminated soil. The IEPA clean-up action was initiated in October of 1986. Activities included: excavation of buried drums from the ravines; removal of surface drums; excavation of soils heavily contaminated by heavy metals or organics; and excavation of soils with cyanide concentrations greater than 100 parts per million (ppm). In situ treatment of cyanide contaminated soils (concentrations less than 100 ppm) using a sodium hypochlorite solution was performed but was only partially successful in that low levels of cyanide remain on site.

In 1984, sampling by IEPA and the Illinois Department of Public Health (IDPH) documented that groundwater off-site was contaminated with volatile organic compounds (VOCs) - primarily trichloroethylene (TCE). Private residential water supply wells located near the site on Acorn and Razorville Roads contained TCE in concentrations of up to 710 parts per billion (ppb). In July, 1984, residents along Razorville Road near the site

and residents along Acorn Road were supplied with bottled drinking water as a temporary measure.

Through 1984 and 1985, the U.S. EPA, IEPA, and IDPH continued to monitor the contamination levels in residential wells located nearby and downgradient from the Salvage Yard.

In May, 1985, the U.S. EPA's contractor, CDM, began a U.S. EPA-lead RI/FS to investigate and evaluate groundwater contamination resulting from past waste disposal practices at the Salvage Yard so as to augment the data collected from the IEPA RI/FS. In October, 1985, U.S. EPA expanded the RI/FS to include a Phased Feasibility Study (PFS) of contaminated residential groundwater wells in the Rock River Terrace Subdivision. Rock River Terrace is located about one and one half miles to the northwest and downgradient from the Salvage Yard.

The PFS was initiated after U.S. EPA, IEPA, and IDPH sampling of residential wells in the subdivision showed contamination with TCE and other volatile organic compounds. The objective of the PFS was to determine the potential health risks due to exposure to the contaminated water supply and to evaluate and recommend an alternative water supply and/or water treatment options to ensure a safe drinking water supply for Rock River Terrace residents.

In April, 1986, a request for Emergency Action to install in-house carbon filtration units at ten residences near the Salvage Yard was signed by the U.S. EPA. These units were installed in the Summer of 1986.

In July, 1986, the IEPA issued a State Record of Decision to extend the municipal water supply system from the City of Byron to the Rock River Terrace subdivision. Construction began in August, 1987, and is now nearing

completion.

After review of the findings from the Phase I Remedial Investigation, the U.S. EPA determined that an additional phase of investigative activities (Phase II) was necessary to fully evaluate alternative remedial actions for the site. This investigation was initiated in September, 1987. This investigation, and the subsequent Feasibility Study were completed in February, 1989.

III. COMMUNITY RELATIONS HISTORY

A public meeting was held on July 18, 1988, to inform the public of RI Activities. In accordance with CERCLA Section 117, the Proposed Plan, which contains information on all the remedial alternatives considered by the U.S. EPA as well as the proposed remedy for the site, was made available to the public for comment on February 22, 1989. Notice of the start of this public comment period was published in a local newspaper on February 21, 1989, announcing the start of a 22-day public comment period running from February 22 to March 15. A public meeting was held in Byron, Illinois on March 9, 1989, to explain the alternatives considered by the U.S. EPA, the U.S. EPA's proposed remedy as outlined in the Proposed Plan, and to solicit comments from the public. On March 14, 1989, the U.S. EPA announced the extension of the public comment period until March 20, 1989. Public comments and responses to the comments are contained in the Responsiveness Summary (Appendix A.)

IV. SCOPE AND ROLE OF OPERABLE UNIT

The operable unit addresses the groundwater contamination emanating from the Salvage Yard site. It is the third of four operable units, of which the final operable unit will address further potential soil and/or groundwater contamination at the Dirk's Farm area.

V. SITE CHARACTERISTICS

A. GEOLOGY/HYDROLOGY

Two aquifers of concern underlie the area in and around the site. The upper aquifer is known as the Galena-Platteville Dolomite. The underlying aquifer is known as the St. Peter Sandstone. The Remedial Investigation concluded that both aquifers contain elevated levels of volatile organics, metals, and cyanide. The upper aquifer, the Galena-Platteville Dolomite, is the more heavily contaminated of the two. The following list contains these hazardous substances and the detected maximum concentration found in the Galena Platteville (upper) Aquifer:

SUBSTANCE	MAXIMUM CONCENTRATION
Benzene	5.0 ppb
Carbon Tetrachloride	5.0 ppb
Tetrachlorethene (PCE)	100.0 ppb
Trichloroethene (TCE)	1400.0 ppb
Vinyl Chloride	140.0 ppb
1,1-Dichloroethane	8.0 ppb
1,1-Dichloroethene	79.0 ppb
1,1,1-Trichloroethane	45.0 ppb

SUBSTANCE (cont'd)	MAXIMUM CONCENTRATION
1,2-Dichloroethane	6.0 ppb
1,2-Dichloroethene	40.0 ppb
1,2-trans-Dichloroethene	750.0 ppb
Arsenic	170.0 ppb
Chromium	126.0 ppb
Copper	335.0 ppb
Lead	280.0 ppb
Nickel	109.0 ppb
Zinc	1090.0 ppb
Simple Cyanide	1532.0 ppb

The St. Peter Sandstone (lower) Aquifer was found to contain the following constituents at the maximum levels indicated:

SUBSTANCE	MAXIMUM CONCENTRATION
Tetrachloroethene (PCE)	10.0 ppb
Trichloroethene (TCE)	550.0 ppb
1,1-Dichloroethene	3.0 ppb
1,1,1-Trichloroethane	13.0 ppb
1,2-Dichloroethane	6.0 ppb
1,2-Dichloroethene	20.0 ppb
1,2-trans-Dichloroethene	20.0 ppb
Chromium	92.0 ppb
Copper	77.0 ppb

SUBSTANCE (cont'd)	MAXIMUM CONCENTRATION
Lead	49.0 ppb
Nickel	86.0 ppb
Zinc	1460.0 ppb
Simple Cyanide	20.0 ppb

Preliminary results of the United States Geological Survey (USGS) pump test (February, 1987), a review of existing literature relative to regional bedrock structural features, hydraulic conductivity tests conducted at the newly installed monitoring wells, and the extensive void spaces encountered while drilling the boreholes to install the new monitoring wells have all shown that the local groundwater flow pattern in the Galena-Platteville Dolomite Aquifer is predominantly controlled by numerous fractures, faults, and/or void (solution) spaces. Because of the existence of fractures, faults and/or void spaces, some monitoring wells are not hydraulically connected to any other monitoring wells and, therefore, are located in isolated "blocks" of dolomite with drastically different hydraulic characteristics. The significant hydraulic differences observed over small lateral distances and vertical depth changes are an indicator of the difficulty in predicting such parameters as hydraulic conductivity, transmissivity, etc., and hence make it difficult to accurately predict contaminant concentrations, at a specific point and depth away from the Salvage Yard.

The USGS pump tests have also shown that the St. Peter Sandstone Aquifer is hydraulically connected to the overlying Galena-Platteville Dolomite Aquifer despite the presence of an aquitard between the two (Harmony Hill Shale). The aquifers are most likely hydraulically connected through

fractures and/or faults that transect all three stratigraphic units. Groundwater contamination detected in the St. Peter Sandstone has probably entered this aquifer via fractures and/or faults that act as a conduit for contaminant transport from the overlying Galena-Platteville Dolomite.

Although fractures, faults, and/or void (solution) spaces control local groundwater flow patterns, the general groundwater flow direction in the vicinity of the Salvage Yard is to the northwest. The predominant trend direction of bedrock fractures and/or faults found throughout the area is also to the northwest. Groundwater also flows to the southwest and to the north/northeast from the Salvage Yard away from an apparent groundwater "ridge" that underlies the Salvage Yard and which seems to parallel the overlying topography. However, this is a localized condition in the vicinity of the ridge and the regional flow continues to be to the northwest. A secondary trend for the fractures and/or faults found in the area runs in a southwest-northeast direction. Because of the proximity of a river to which the contaminated aquifers discharge without significant impact, the fractured nature of the contaminated aquifers, and the spread of contamination already between the site and the river, it was determined in the feasibility study that, in this particular case, additional treatment of the source (beyond the surface and subsurface removal and product-layer extraction) by groundwater extraction would not be sufficient or practicable compared to providing potable water to residences between the site and river.

B. SOIL, SEDIMENT AND SURFACE WATER CONDITIONS

Surface water sampling at Meyers Spring, located nearly three-fourths of a mile to the northwest of the Salvage Yard, has in the past shown volatile organic contamination and currently contains elevated levels of

cyanide.

Soil sampling conducted in the Salvage Yard during the Phase II Remedial Investigation indicated the presence of elevated levels of volatile organics, metals, and/or cyanide. Areas of soil contamination above background levels are scattered and no discernible pattern of contamination was identified relative to the depth or location of the contaminated soil remaining on site. Cyanide contamination, found to be the most extensive contaminant relative to total volume of soil and total area at the Salvage Yard, was detected in 18 of 28 quadrants sampled. After comparing the analytical results to background and laboratory blank results, only one sample obtained from the Salvage Yard was found to contain elevated levels of volatile organics.

Listed below are the hazardous substances detected and their maximum concentration remaining in the Salvage Yard:

SUBSTANCE	MAXIMUM CONCENTRATION
Toluene	7.9 ppm
Xylenes	13 ppm
Antimony	2.5 ppm
Copper	805.0 ppm
Lead	485.0 ppm
Nickel	565.0 ppm
Zinc	27,729.0 ppm
Mercury	1.7 ppm
Total Cyanide	133.0 ppm

Sediment sampling conducted in dry ravines north of the Salvage Yard also has shown similar contamination. A ravine that drains the northeast corner of the Salvage Yard was found to contain total cyanide at a maximum concentration of 6.8 ppm.

VI. SUMMARY OF SITE RISKS

The public health evaluation performed as part of the RI considered health risks to the local population from exposure to groundwater, surface water (at the site and at Meyers Spring pond), surface soils, and sediments at the site.

Results of the Public Health Evaluation (PHE) indicate that a human health risk exists for consumption of groundwater.

Ingestion of chemicals in groundwater which may pose an unacceptable health risk are listed below:

Organic Chemicals	Inorganic Chemicals
Tetrachlorethene	Cadmium
Trichlorethene	Chromium
Vinyl Chloride	Lead
1,1-Dichlorethene	Nickel

Potential risks due to ingestion of groundwater were evaluated in the Endangerment Assessment and are summarized in Table 1. Surface water sampling at Meyers Spring has revealed low level contamination from volatile organics and cyanide when analyzed during the Phase II investigation. The PHE concluded that the low levels of contaminants currently present in the

soils and sediments of the Salvage Yard do not pose a health risk, either by ingestion, inhalation, or dermal contact to the local population or possible future users of the Salvage Yard or Meyers Springs Pond. U.S. EPA concluded in its assessment that levels of contaminants in soil and sediments on the Byron Salvage Yard portion of the site do not warrant further removal of soils.

VII. DESCRIPTION OF ALTERNATIVES

Three alternatives were developed to address the remedial objective. The work described in Alternative 1 will also be performed in Alternatives 2 and 3. Alternatives 2 and 3 each contain additional action to remedy the threat posed by contaminated groundwater.

Alternative 1 does not provide remediation of the threat posed by contaminated groundwater. All of the alternatives also include institutional controls and/or other actions that will preclude future use of the groundwater in undeveloped areas where the groundwater is contaminated due to the Byron Salvage Yard NPL Site. Because of the applicability of alternate concentration limits, the availability of a municipal water supply, the proximity of a river to which the contaminated aquifers discharge without significant impact, the fractured nature of the contaminated aquifers, and the spread of contamination already between the site and the river, it was determined that, in this particular case, additional treatment of the source (beyond the surface and subsurface removal and product-layer extraction) by groundwater extraction would not be sufficient or practicable compared to providing potable water to residences between the site and river.

TABLE 1

Byron Salvage Yard
Human Health Risk Due to Ingestion of Groundwater

Phase I Risk Assessment Results

	Acorn Road Residents	Rock River Terrace Residents
Total Excess Cancer Risk		
Lifetime Exposure		
Mean Concentration	2×10^{-3}	8×10^{-6}
Maximum Concentration	7×10^{-3}	2×10^{-5}
Hazard Index For Non-carcinogenic Health Effects		
Lifetime Exposure		
Mean Concentration	< 1	< 1
Maximum Concentration	> 1	< 1

Phase II Risk Assessment Results

Total Excess Cancer Risk		
Lifetime Exposure		
Mean Concentration	8×10^{-5}	6×10^{-7}
Maximum Concentration	1×10^{-4}	4×10^{-6}
Hazard Index For Non-carcinogenic Health Effects		
Lifetime Exposure		
Mean Concentration	< 1	< 1
Maximum Concentration	< 1	< 1

ALTERNATIVE 1: NO ACTION

Under this alternative, no further action would be taken to minimize the potential risk to public health from consumption of contaminated groundwater. This alternative includes actions which will complete work begun under previously signed Records of Decision, Remedial Actions, or the current Remedial Investigation and provide for long-term monitoring.

This alternative involves the removal of all wastes generated during the U.S. EPA Remedial Investigation consisting of debris and barrels. Contaminated soils from IEPA's earlier removal action were previously disposed of at the Chemical Waste Management's CID Landfill. A soil cover would also be installed on the affected portions of the site, the site would be regraded to establish stable slopes, and would be revegetated for erosion control.

This alternative also involves installing additional groundwater compliance monitoring wells along the Rock River, and collecting and analyzing samples. Surface water sampling would be conducted at the Meyers Spring Pond and Rock River. Results of surface water sampling would be compared to the appropriate standards to evaluate if conditions exist which may warrant additional actions. Groundwater samples would also be collected and analyzed from selected private wells and monitoring wells for long-term monitoring. The U.S. EPA and IEPA will review the monitoring program no less often than every five years to determine if changes are warranted. The entire site would also be evaluated no less often than every five years to determine if any conditions have changed which may warrant additional actions, or reduction of the actions proposed in this alternative. This alternative

also involves plugging and abandoning those monitoring wells determined to be unnecessary for long term monitoring. The total cost of this alternative is $385,000 with annual Operation and Maintenance (O&M) costs of $16,000. Full implementation of this alternative can be completed in less than one year.

ALTERNATIVE 2: Extension of the IEPA - Funded Water Main

Under this alternative, the U.S. EPA will extend the water main to an additional 27 residences not connected under the prior extension by the IEPA and will perform all tasks identified in Remedial Alternative 1.

Institutional controls (including such things as deed restrictions or mandatory hook-ups to available public water supplies), plugging and abandoning residential wells, and/or other such actions will provide enforceable measures that will preclude human exposure to the contaminated groundwater at any point between the site boundary and all known and projected points of entry of such groundwater into surface water.

The total capital cost of this alternative is $917,000, with annual O & M costs of $16,000 and can be fully implemented in one year.

ALTERNATIVE 3: Installation of Carbon Adsorption Units in Residences

This alternative proposes the same components as Alternative 1 as well as the installation of in-house carbon adsorption units in the 27 residences in the affected areas currently not connected to the IEPA water line extension.

The total capital cost of this alternative is $420,000 with annual O & M costs of $34,000. This alternative can be implemented in less than one year.

VIII. SUMMARY OF THE COMPARATIVE ANALYSIS

The nine criteria used by the U.S. EPA to evaluate remedial alternatives include: 1. overall protection of human health and the environment; 2. compliance with Applicable, or Relevant and Appropriate, Requirements (ARARs); 3. long-term effectiveness; 4. reduction of toxicity, mobility, or volume; 5. short-term effectiveness; 6. implementability; 7 costs; 8. state acceptance; and 9. community acceptance. Based on evaluation of the alternatives with respect to the nine criteria, EPA has selected Alternative 2 - connection of additional residences to the municipal water main - as the preferred alternative for the Byron Salvage Yard operable unit remedy.

1. Overall Protection of Human Health and the Environment

Alternative 2 is the most protective of human health and the environment of the alternatives evaluated for this operable unit. This alternative will protect the affected residences by providing an uncontaminated source of water. Only minimal environmental disturbances will occur if this alternative is implemented. Alternative 3, installation of in-house carbon adsorption systems, will also provide a high degree of protection to the affected residents with no environmental disturbance. However, if this carbon adsorption system fails (because of breakthrough in the carbon adsorption filters), residents may ingest contaminated groundwater. In addition, this treatment method is not effective for all potential groundwater contaminants (inorganics and cyanide being the major exceptions), and there would be neither plugging nor abandonment of

residential wells. Alternative 1 offers no protection of human health and environment from ingestion of contaminated groundwater.

2. Compliance with ARARs

The following list of ARARs will be complied with at the site:

* Section 121(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended - requiring evaluation no less often than each five years after initiation of the remedial action at sites where hazardous materials remain at the site.
* National Ambient Water Criteria promulgated pursuant to the Clean Water Act, 33 U.S.C. Section 1251 et seq.
* Illinois Water Quality Standards
* 40 C.F.R. 268 - requiring disposal of waste generated during RI activities in accordance with land disposal restrictions.
* National Ambient Air Quality Standards - PM 10 and for lead - during regrading activities at the site.
* OSHA - General Industry Standards (29 C.F.R. Part 9010) regarding worker safety.
* D.O.T. Rules for the Transportation of Hazardous Materials (49 C.F.R. Parts 107, 171.1-171.500) regarding transport of contaminated material requirements.
* Resource Conservation and Recovery Act (RCRA) - 42 U.S.C. Section 6901 et seq. and 40 C.F.R. Part 264.94.

For further discussion concerning ARARs, please refer to Section X of

this Record of Decision.

3. Long-term Effectiveness and Permanence

Alternative 2 will allow the residents to become customers of the local water utility, and thereby have a permanent supply of safe drinking water. The local water utility will then provide all long-term operations and maintenance of the system. Implementing Alternative 3 would offer a lesser degree of long-term effectiveness. Ingestion may still occur through several ways, such as filter breakthrough. Alternative 3 would require extensive long-term monitoring and operation and maintenance activities. Additionally, if heavy metals or cyanide contamination are present in residential well water, use of carbon adsorption units will not reduce the ingestion of these contaminants.

4. Reduction of Toxicity, Mobility and Volume of Contaminants

Alternative 2 provides a source of uncontaminated potable water to residents in danger of drinking contaminated groundwater emanating from the Byron Salvage Yard NPL Site. Alternative 3 utilizes treatment to provide a source of potable water to residents, but runs the risk of having residents ingest water contaminated with cyanide and metals. These two alternatives will decrease the toxicity of contaminants to affected residents who are now drinking groundwater from private wells.

Alternatives 1, 2, and 3 will not provide any reduction in the toxicity, mobility, or volume of contaminants remaining in the groundwater because they do not involve treatment of the contaminated groundwater.

5. Short-term Effectiveness

None of work to be performed during implementation of the alternatives present any significant risks to the community or the environment. Potential effects on nearby residents during implementation of these alternatives would be related to generation of dust during regrading. However, the off-site effects will be minimized by construction practices and assured through the implementation of an air monitoring program during remediation.

The implementation times for these alternatives depend on the technology selected to provide residents a supply of potable water. Extending the Byron municipal water supply main (Alternative 2) may be completed in approximately one year. All other tasks included in Alternative 2 will be performed concurrently with and, except for the long-term monitoring and site evaluations, will be accomplished by the time the water main extension is completed.

Installation of in-house carbon adsorption systems (Alternative 3) may be completed in three to six months (upon completion of the design and bid phases). Again, other tasks identified in Alternative 1 and to be performed in all the Alternatives may be performed concurrently with the adsorption system installation.

6. Implementability

All technologies included in the three alternatives are technically feasible.

Some residences in the vicinity of the Site have already been connected to the municipal water supply and/or had in-house carbon filtration

systems installed.

Construction permits will be needed to install the municipal water system main. All other technologies may be implemented with a minimum of coordination with other agencies.

All materials and services to implement all alternatives are readily available. Most materials and services will be available from local sources. Materials which are not available locally may be obtained from nation-wide vendors.

7. Cost

Alternative 2, at a cost of $917,000, is the most expensive alternative. Projected costs for Alternatives 1 and 3 are $385,000 and $420,000 respectively. However, because of the expense involved in operating and maintaining the carbon adsorption systems, the total present worth of Alternatives 2 and 3 is not significantly different ($1,100,000 and $780,000 respectively).

8. State Acceptance

The Illinois Environmental Protection Agency (IEPA) is expected to concur with this remedy.

9. Community Acceptance

Community involvement at the site has been moderate. The primary concerns expressed in the previous IEPA public meetings concerning their preferred alternative to extend the water main was that the residents wanted a permanent and safe supply of drinking water with a minimum of maintenance.

The residents have also requested that any potential sources of contamination be removed. A complete list of public comments and responses to those comments are provided in Appendix A.

IX. SELECTED REMEDY

As previously discussed, the U.S. EPA has selected Alternative 2, which incorporates all the work identified in Alternative 1 and involves extension of the municipal water supply system to additional residences. This alternative was selected because it is protective of human health, complies with the requirements of CERCLA, and is the most reliable of the final remedial alternatives under consideration.

The major components of the selected remedy include:

* Extending the IEPA-funded Rock River Terrace subdivision municipal water supply system to provide twenty-seven additional residences with an alternate supply of drinkable water;
* Removing all wastes generated during the Remedial Investigation of the site;
* Adding one foot of soil cover to the affected areas of the site, regrading, and planting vegetation on the new surface;
* Installing additional groundwater compliance monitoring wells at or near the Rock River;
* Collecting and analyzing groundwater samples from new wells at Rock River determined to be necessary for long-term monitoring;

* Performing surface water sampling at the Meyers Spring Pond and Rock River determined to be necessary for long-term monitoring;
* Collecting and analyzing groundwater samples from selected private wells and monitoring wells determined to be necessary for long-term monitoring;
* Evaluating the site no less often than every five years to determine if any conditions have changed that may warrant additional actions or reductions in those actions proposed herein;
* Plugging and abandoning those monitoring wells no longer in use;
* Institutional controls (including such things as deed restrictions or mandatory hook-ups to public water supplies), plugging and abandoning residential wells, and/or other such actions will be used to provide enforceable measures that will preclude human exposure to the contaminated groundwater at any point between the site boundary and all known and projected points of entry of such groundwater into surface water.

X. STATUTORY DETERMINATIONS

U.S. EPA believes that the selected remedy satisfies the statutory requirements specified in Section 121 of CERCLA to protect human health and the environment; is cost effective; attains ARARs; and utilizes permanent

solutions and alternative treatment technologies to the maximum extent practicable.

Protection of Human Health and the Environment

The selected remedy, Alternative 2, will protect human health and the environment since it will provide area residents with an uncontaminated source of potable drinking water and will eliminate the exposure of area residents to carcinogenic and non-carcinogenic contaminants in their drinking water. The potential generation of airborne particulates during regrading of the site may cause adverse effects on nearby residents. However, the effects off-site will be minimized by construction practices and assured through the implementation of an air monitoring program during remedial action activities. If applicable or relevant and appropriate requirements are exceeded, remedial actions will be taken to eliminate or minimize this threat.

Attainment of Applicable, or Relevant and Appropriate Requirements

Maximum Concentration Limits are not considered relevant and appropriate for the groundwater at this site because Alternate Concentration Limits are appropriate, remediation of the groundwater is not proposed, and hook-up of all area residences to an alternate water supply system, once the water line is installed and operational will, along with the plugging and abandoning of wells, institutional controls and/or other such actions, preclude human exposure to contaminated groundwater emanating from the site. By furnishing those residents who are in danger of drinking contaminated groundwater from private wells a clean supply of water from the municipal

water system, Maximum Concentration Limits for contaminants in water established pursuant to the Safe Drinking Water Act will not be exceeded at the tap for those residents. In lieu of Maximum Concentration Limits, the U.S. EPA is establishing Alternate Concentration Limits as defined in CERCLA Section 121(d)(2)(B)(ii) and RCRA since:

(I) There are known and projected points of entry of such groundwater into surface water; (Meyers Spring Pond and the Rock River) and

(II) On the basis of measurements or projections, there is or will be no statistically significant increase in such constituents from such groundwater in such surface at the point of entry or at any point where there is reason to believe accumulation of constituents may occur downstream; and

(III) The remedial action will include enforceable measures that will preclude human exposure to the contaminated groundwater at any point between the facility boundary and all known and projected points of entry of such groundwater into surface water, then the assumed points of human exposure may be at such known and projected points of entry.

While Alternate Concentration Limits for contaminants will be set at their current concentrations in the affected aquifers, Maximum Concentration Limits for Ambient Water Quality Criteria and/or Illinois Water Quality Standards will be attained at Meyers Spring Pond and the Rock River. Compliance will be verified through surface water sampling at Meyers Spring Pond and surface water and compliance monitoring well sampling at the Rock River.

If institutional controls, which are the enforceable measures which will preclude human exposure to contaminated groundwater at any point between the facility boundary and all known and projected points of entry of such groundwater into the surface water, are not successfully implemented by the time the alternate water is fully installed and operational, then the U.S. EPA will reconsider the Record of Decision (ROD), and amend the ROD as necessary so that the remedy comports with the cleanup standards of CERCLA Section 121.

Alternative 2 requires a permit to construct or modify a water supply installation as per Illinois Administrative Code Title 35; Subtitle F; Chapter T; Section 601. Prior to operating the water main extension, an operating permit is required from the IEPA.

Alternative 3 requires carbon adsorption media to be disposed of in accordance with 40 C.F.R. Part 268.

Cost-Effectiveness

Alternative 2, while slightly more expensive, provides a higher degree of long-term effectiveness and permanence than do alternatives 1 or 3. Alternative 3 is less expensive, but entails a lower degree of long-term effectiveness, protection of human health, and permanence with much greater operation and maintenance requirements.

Utilization of Permanent Solutions and Alternate Treatment Technologies to the Maximum Extent Practicable, and Preference for Treatment as a Principal Element

The intent of this operable unit is to provide effective remediation of the threat posed by ingestion of contaminated groundwater. Because of the applicability of alternate concentration limits, the availability of a municipal water supply, the proximity of a river to which the contaminated aquifers discharge without significant impact, the fractured nature of the contaminated aquifers, and the spread of contamination already between the site and the river, it was determined that, in this particular case, additional treatment of the source (beyond the surface and subsurface removal and product-layer extraction) by groundwater extraction would not be sufficient or practicable compared to providing potable water to residences between the site and river. Therefore, in lieu of remediation of contaminated groundwater, the U.S. EPA has chosen to provide residents with an alternate, uncontaminated supply of water. This will be provided by extending the Byron Municipal water main rather than by utilizing individual carbon treatment units which have a lower expectation of long term effectiveness and permanence with much greater operation and maintenance requirements.

APPENDIX A

RESPONSIVENESS SUMMARY

Byron Salvage Yard

Byron, Illinois

I. Responsiveness Summary Overview

In accordance with CERCLA Section 117, a public comment period was held from February 22, 1989, to March 20, 1989 to allow interested parties an opportunity to comment on the United States Environmental Protection Agency's (U.S. EPA's) Feasibility Study and Proposed Plan for a proposed remedy at the Byron Salvage Yard operable unit. At a March 9, 1989 public meeting, U.S. EPA presented the Proposed Plan for the Byron Salvage Yard, answered questions and accepted comments from the public.

The purpose of this Responsiveness Summary is to document comments received during the public comment period and the U.S. EPA's responses to those comments. All comments summarized in this document were considered in U.S. EPA's final decision for Remedial Action at the Byron Salvage Yard.

II. Summary of Significant Comments Received During the Public Comment Period and U.S. EPA's Responses.

The comments are organized into two categories, the summary of public hearing comments and the summary of comments by potentially responsible parties (PRPs). The comments are paraphrased in order to effectively summarize them in this document. The reader is referred to the public meeting transcript available at the public repository for further information.

A. Summary of Public Hearing Comments

Comment

How long will it take to implement the proposed Remedial Alternative?

Response

The selected alternative can be implemented within one year after completion of the design and securing of all necessary permits.

Comment

Which private wells will be used for long-term monitoring?

Response

This will be evaluated in detail during the Remedial Design. Public comment will be solicited in the selection of which wells are to be used for the monitoring. Factors such as location and well depth will be used as criteria for this selection.

Comment

Why is it necessary to plug and abandon the residential wells?

Response

It is desirable to plug and abandon residential wells so as to eliminate the current and potential future threat of exposure to contaminated groundwater caused by the use of private wells as a source of drinking water. The ingestion and overall exposure to this groundwater, which contains carcinogenic and non-carcinogenic contaminants, presents an unacceptable risk to human health. Due to fractured bedrock in the area, contaminant levels may increase in private wells as the plume of contaminated water migrates toward the Rock River.

Comment

Who would pay to have the wells plugged and abandoned?

Response

If PRPs will not pay for the work upfront, the U.S. Environmental Protection Agency and/or the Illinois Environmental Protection Agency would pay for all costs associated with this action. Under the CERCLA statute, the U.S. EPA can then attempt to recover its costs from the PRPs.

Comment

Where are the twenty-seven homes you proposed to hook up?

Response

Ten homes are in the Rock River Terrace subdivision that chose not to be hooked up to the IEPA-funded extension. Seventeen homes to be hooked up are located along Razorville Road, River Road, or in Meyers subdivision.

Comment

Why does the U.S. EPA want to backfill, regrade, and revegetate the site?

Response

The U.S. EPA will backfill the previously excavated portions of the

site to stabilize the ravines located in the eastern portion of the site and will revegetate in order to minimize erosion from the newly backfilled and regraded areas.

Comment

Are there any acute, short-term risks associated with consumption of contaminated groundwater in the affected or potentially affected areas?

Response

The ingestion of groundwater in the Rock River Terrace area presents an unacceptable long-term, lifetime exposure to substances known to increase the likelihood of carcinogenic and/or noncarcinogenic risk. Based on current levels of contaminants and future projections of contaminant levels, a short-term or acute risk does not exist. For further information, the Public Health Evaluation section of the Remedial Investigation report contains a detailed analysis of the threats posed by the groundwater.

Comment

What is risk?

Response

Risk means there is a possibility of suffering some harm. At this site the risk comes largely from drinking water tainted with contaminants emanating from the site that could increase a person's carcinogenic or noncarcinogenic risk.

Comment

What is going to be done with Dirk's Farm?

Response

The U.S. EPA is continuing negotiations with the potentially responsible parties in an attempt to have them fund an investigation of Dirk's Farm. If a negotiated settlement can't be reached in 1989, the U.S. EPA expects to fund the study itself.

Comment

Would future homeowners be able to hook up to the waterline?

Response

The City of Byron can be contacted concerning this possibility.

Future homes would be hooked up at their own expense.

Comment

Will there be restrictions on future well digging?

Response

Restrictions on future well digging are desirable in the affected area to avoid use of contaminated groundwater. The Illinois Department of Public Health is responsible for issuing permits. The restricted locations are expected to be jointly decided by the U.S. EPA, IEPA, County and City officials.

B. Summary of Comments from the PRPs

Comment

Commenwealth Edison, the owner of Dirk's Farm, does not think that Dirk's Farm is contributing to groundwater contamination in the area of the site.

Response

A remedial investigation/feasibility study (RI/FS) has not yet been conducted at Dirk's Farm. The data available at this time preclude the U.S. EPA from making a definitive statement to the effect that contaminants are not entering the groundwater at Dirk's Farm and creating or contributing to groundwater contamination in the vicinity of the site. The U.S. EPA is planning on having an RI/FS conducted at Dirk's Farm.

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	2	76/07/19	Letter to Johnson from IEPA requesting that he supply information	Piskin, IEPA	W.Johnson	Correspondence	1
1		76/08/12	Letter from IEPA to S. Levin, Atty. representing Mr. Johnson re: IPCB interim order to provide information	Sidler, IEPA	S.Levin,Atty. for Johnson	Correspondence	2
	2	80/12/17	Letter calling attention to the Byron site and requesting that funds be earmarked for removal operation.	Michael Williams-OgleCo.Health Dept	Irene Alexakos-IEPA	Correspondence	3
2		83/02/24	Certified Letter informing W.Mosley of Byron investigation	Constantelos,USEPA	W.Mosley	Correspondence	4
1		84/01/04	Letter to Henninger of Comm Ed from USEPA re: permission to build a fence around the site	Berman,USEPA	Henninger,Comm Ed	Correspondence	5
	3	84/01/11	Sample letter sent to area homeowners in regards to recent sampling of their drinking water	Robert Cowles-IEPA	area homeowners	Correspondence	6
	2	84/01/13	Complaint and request for corrective action from the Director of the Byron Forest Perserve District and a request for official documentation of any tests or reports.	Jack Philbrick-Byron FPD.	Robert Cowles-IEPA	Correspondence	7

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	2	84/01/25	Letter in response to letter about water sampling and improper release of results.	Robert Cowles-IEPA	J.Philbrick-Byron FPD	Correspondence	8
	6	84/08/29	Certified Letter to PRPs informing them of their potential responsibility	Constantelos,USEPA	see listing	Correspondence	9
	3	84/09/28	Certified Letter to USEPA from Henninger of Conn Ed in response to USEPA letter requesting information as to Conn Ed's willingness to cleanup site	Henninger, Conn Ed	Berman,USEPA	Correspondence	10
	3	84/10/30	Letter forwarding contractor's survey notes and discussing the fencing off of Byron yard	Cowles,IEPA	Philbrick,Byron For.Pres.	Correspondence	11
	1	84/11/07	Letter to USEPA from Conn Ed stating that Conn Ed is willing to allow USEPA access to their files	Henninger,Conn Ed	Berman, USEPA	Correspondence	12
	1	84/11/16	Letter documenting acceptance of additional groundwater investigation and continued providing of bottled water	Cowles,IEPA	Oaks, USEPA	Correspondence	13
	1	84/12/04	Certified Letter to landowner Schnabel confirming his permission to install fence around Byron	Berman, USEPA	W. Schnabel,landowner	Correspondence	14
		85/01/29	Letter to Henninger re: Plat Map	Berman, USEPA	Henninger, Conn Ed	Correspondence	15

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	1	85/02/07	Letter to Henninger of Comm Ed from USEPA notifying Comm Ed of a proposed visit by USEPA to access files	Berman,USEPA	Henninger, Comm Ed	Correspondence	16
	6	85/02/15	Letter from Comm Ed to USEPA permitting the work to be performed on Edison's property	Henninger,Comm Ed	Berman,USEPA	Correspondence	17
	6	85/06/06	Certified Letter to PRPs from USEPA informing them of their potential responsibility	Constantelos,USEPA	see listing	Correspondence	18
	3	85/06/20	Certified Letter to Aurora Natl. Bank informing them of the fencing in of Byron and their potential responsibility	Constantelos,USEPA	Aurora Natl. Bank	Correspondence	19
	3	85/06/27	Certified Letter to Quality Metal Products informing them of thier potential responsibility	Constantelos, USEPA	Quality Metal Products	Correspondence	20
	4	85/06/27	Certified Letter informing PRPs of their potential responsibility	Constantelos,USEPA	see listing	Correspondence	21
	1	85/07/23	Letter to Henninger of Comm Ed from USEPA re: USEPA request to obtain a copy of report of buried contamination and permission to contact Comm Ed consultants Danes & Moore	Teskis,USEPA	Henninger, CommEd	Correspondence	22
	5	85/07/30	Certified Letter to J. Vincer informing him of his potential	Constantelos, USEPA	J.Vincer	Correspondence	23

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			responsibility				
	5	85/10/24	Letter re: Drum Disposal at Byron	PRP Interstate Atty.	Berman, USEPA	Correspondence	24
	1	85/12/12	Letter from EPA to Comm Ed requesting permission to construct an additional well on CEC property	Yeskis,USEPA	Henninger,Comm Ed	Correspondence	25
	2	85/12/27	Letter to Henninger of Comm Ed requesting info. re: Byron site	Constantelos,USEPA	Henninger,Comm Ed	Correspondence	26
	54	86/05/00	Public written comments submitted to the USEPA postmarked on or before 8/5/86 along with list of people who submitted verbal and written comments		McCue-USEPA Community Rel	Correspondence	27
	5	86/05/19	Generic letter to residents forwarding analysis results of thier wells	Wallace,USEPA	residents	Correspondence	28
	1	86/06/16	Generic letter to residents informing them of carbon filter installation	Wallace,USEPA	Byron area residents	Correspondence	29
	1	86/07/07	Letter from citizens discussing their concerns and recommending the use of Byron City Water as their preferred solution.	Citizens of Rock River Terrace area	McCue-USEPA	Correspondence	30
	1	86/07/09	Letter to Rock River Residents asking about treatment preference	Carlson,IEPA	Rock River Residents	Correspondence	31
	4	86/07/10	Certified letter to PRPs as a reminder to PRP notice letter-info	Basil Constantelos - USEPA	see listing	Correspondence	32

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			request				
	3	86/07/15	Certified Letter to Worden,Quality Metal's Atty., informing him of Byron site's precise location	Berman,USEPA	Worden,Quality Metal Atty	Correspondence	33
	2	86/08/07	Letters to residents from USEPA re: the effectiveness of carbon filter installed	Wallace,USEPA	see title field	Correspondence	34
	95	86/09/15	Letter from A.Running of Kirkland and Ellis Attys. representing Natl. Lock forwarding information about cyanide removal	Running,Atty. for Natl. Lock	Berman,USEPA	Correspondence	35
	8	86/10/06	Letters updating residents on the effectiveness of carbon filters installed	Wallace,USEPA	residents	Correspondence	36
	2	86/11/13	Sample Letter sent to 5 residences forwarding analysis results from samples taken in August	Wallace,USEPA	5 Byron area residents	Correspondence	37
	7	86/12/03	Letter re:Contaminated Soil Excavation Quantity	Paul Wintheiser-Donohue & Assoc.	John Hooker - IEPA	Correspondence	38
	2	86/12/05	Generic Letter to area residents re: sample results taken in October	Wallace, USEPA	area residents	Correspondence	39
	2	87/01/05	Erosion control at Byron	Paul Wintheiser - Donohue & Assoc.	John Hooker - IEPA	Correspondence	40

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	2	87/01/28	Generic Letter to area residents re:sample results from December	Wallace, USEPA	area residents	Correspondence	42
	2	87/03/12	Letters to residents informing them of sample results taken in January	Wallace, USEPA	area residents	Correspondence	43
	2	87/04/15	Information necessary for the IEPA to issue a discharge permit to the USEPA.	Kennetyh Wallace - USEPA	Tim Kluge - IEPA	Correspondence	44
	2	87/04/21	letter to concerned Byron area resident	Wallace, USEPA	K. Myers	Correspondence	45
	2	87/04/23	Letter to residents re:sample results taken in March	Wallace,USEPA	area residents	Correspondence	46
	6	87/04/29	Letters to residents informing them of sample results taken in February and March	Wallace, USEPA	area residents	Correspondence	47
	2	87/06/18	Letter to residents regarding analysis of samples taken in April	Wallace, USEPA	area residents	Correspondence	48
	2	87/07/25	Letter to resident from USEPA forwarding sample results taken in May	Wallace, USEPA	area resident	Correspondence	49

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	2	87/08/09	Letter to residents informing them that their carbon filtration unit is effective	Wallace,USEPA	area residents	Correspondence	51
	12	87/10/20	Byron-Johnson Superfund Site/ Additional Sampling on Neighboring Dirks Farm	Thomas Henninger-Commonwealth Ed.	Valdas Adamkus - USEPA	Correspondence	52
	2	87/11/19	USEPA position that additional soil gas investigation on Dirks Farm is necessary.	Valdas Adamkus - USEPA	T.Henninger-Comm. Ed.	Correspondence	53
	2	88/01/25	Letter from Comm Ed to USEPA recommending that investigation of soil gas is conducted	Henninger, Comm Ed	Adamkus,USEPA	Correspondence	54
	3	00/00/00	IEPA Rock River Terrace Fact Sheet on Drinking Water Remedies	IEPA		Fact Sheet	55
	4	00/00/00	Fact Sheet: Feasibility Study Summary	IEPA		Fact Sheet	56
	6	00/00/00	Community Relations Responsiveness Summary	IEPA		Fact Sheet	57
	4	00/00/00	Fact Sheet on Rock River Terrace well contamination by Trichloroethylene.	USEPA		Fact Sheet	58
	1	00/00/00	Fact Sheet on Byron-Salvage Yard Ground-water Investigation	USEPA		Fact Sheet	59
	2	83/09/00	Fact Sheet #1 - Progress	IEPA		Fact Sheet	60

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	5	86/06/00	Superfund Fact Sheet on Byron	USEPA		Fact Sheet	62
	2	86/10/17	Fact sheet to interested persons re:comments received on temporary solution	McCue, Wallace,USEPA		Fact Sheet	63
	2	87/02/25	Fact Sheet to persons interested in Byron	Wallace, McCue,USEPA		Fact Sheet	64
	2	87/06/03	Letter to residents interested in Byron;Update on activities	McCue,Wallace,USEPA	Interested residents	Fact Sheet	65
	8	89/03/00	Fact Sheet: Proposed Plan for Cleanup of Byron Announced	USEPA		Fact Sheet	66
	7	00/00/00	Assorted Maps of reported dump sites,soil borings etc.			Maps	67
	1	84/06/13	Map:Extent of Surficial Soil Contamination	D'Appolonia for IEPA		Maps	68
	1	85/05/18	Certified Boundary Survey	Lundgren and Associates,P.E.s		Maps	69
	4	84/09/03	Memo re: Public Meeting Concerning Byron	Musgrave, USEPA	Canavan, USEPA	Meeting Notes	70
	2	84/09/19	IEPA Superfund meeting Hearing Officer's Opening Statement	G.Craven,IEPA	Carlson,IEPA	Meeting Notes	71
	3	86/06/24	USEPA Public Meeting, Rockvale Township Hall	USEPA		Meeting Notes	72
	2	71/06/07	IEPA interagency memo concerning Solid Waste Disposal at Byron	IEPA,Rockford Region	IEPA,BLPC	Memorandum	73

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	2	74/05/28	Memo within IEPA re: meeting with Ernie Johnson son of owner re: Disposal of liquid wastes	Marques,Kehoe,IEPA	DLPC,and DWPC/FOS,IEPA	Memorandum	75
	7	81/10/29	"The Current Status of Surface and Ground Water Contamination Around the Old Johnson Salvage Yard"	Kenneth Bardo-IEPA		Memorandum	76
	5	82/03/04	"A Follow-up Study on Ground-water and Surface Water Contamination Caused by the Disposal of Toxic Wastes at the Byron Salvage Yard"	Kenneth Bardo - IEPA	file	Memorandum	77
	2	83/03/24	Decision memo: Cooperative Agreement Application for Byron	Adamkus,USEPA	Hedeman,USEPA	Memorandum	78
	2	84/01/24	Memo on TCE in drinking water wells and conference call between IEPA,USEPA and Ogle Co. Public Health Dept.	Greg Michaud-IEPA	Cowles,Frank&Craven -IEPA	Memorandum	79
	3	84/08/02	Decision Memo for Remedial Action at the Byron Salvage Yard.	Bob Cowles - IEPA	Jim Frank - IEPA	Memorandum	80
	2	84/09/25	Hearing Officer's Report-Superfund meeting and hearing for Byron Salvage			Memorandum	81

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	3	84/10/25	Memo re: Scope of Work for CH2M Hill,zone contractor for Byron	Waldvogel,OSC,USEPA	Mateer,USEPA,and CH2M Hil	Memorandum	83
	3	84/11/30	Memo re:Authorization for Supplemental RI/FS	Constantelos,USEPA	Adamkus,USEPA	Memorandum	84
	3	84/12/17	Memo regarding extension of 6 month limit on immediate removal action	Constantelos,USEPA	Adamkus,USEPA	Memorandum	85
	5	85/04/23	Trip Report on trip to meet with Comm Ed and IEPA and visit site	Yeskis,USEPA		Memorandum	86
	4	85/05/03	Request for funding for immediate action at Byron	Castle, USEPA	Adamkus, USEPA	Memorandum	87
	4	85/05/08	Action Memo requesting funding for supplemental RI/FS	Constantelos, USEPA	Adamkus, EPA	Memorandum	88
	3	85/05/24	Trip Report on trip to secure soil samples in order to obtain access agreement for fencing on property owned by J.Vincer	Yeskis,USEPA		Memorandum	89
	7	85/07/16	Trip Report on trip to sample soil and residential wells and survey geophysical conditions for RI/FS	Yeskis,USEPA	file	Memorandum	90
	3	85/07/17	Action Memo Authorizing Deobligation of Funds from CH2M Hill and supplement funds for the RI/FS at Byron	Constantelos,USEPA	Adamkus, USEPA	Memorandum	91
	1	85/07/17	Trip Report on June 6	Yeskis,USEPA	file	Memorandum	92

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			1985 trip to Byron to delineate fracture traces using electrical resistivity				
	4	85/07/24	Trip Report on meeting in Byron to discuss construction of security fence around site	Yeskis		Memorandum	93
	2	85/08/30	Restricted area at Byron	John Hooker - IEPA	Bob Cowles - IEPA	Memorandum	94
	3	86/04/18	Request for Emergency Action at Byron, In-line Carbon Filter Installation	Constantelos,USEPA	Adamkus,USEPA	Memorandum	95
	2	86/05/22	Action Memo re: Request for Additional Funds to Complete a Supplemental RI/FS	Constantelos,USEPA	Adamkus,USEPA	Memorandum	96
	1	86/08/28	Recommendation for ROD Implementation on Rock River Terrace Project.	John Hooker - IEPA	Bob Cowles - IEPA	Memorandum	97
	2	86/12/10	Action Memo re: Authorization to Obligate Funds for Byron	Constantelos, USEPA	Adamkus, USEPA	Memorandum	98
	1	86/12/23	Memo on removal of additional contaminated soil	John Hooker - IEPA	John Hlavacek - IEPA	Memorandum	99
	2	87/02/02	Action Memo re: Authorization to Obligate Funds for the Byron Site	Constantelos,USEPA	Adamkus,USEPA	Memorandum	100
	3	87/05/15	Byron Salvage Yard Summary and Status	John Hooker - IEPA	Bill Child - IEPA	Memorandum	101
	2	87/09/10	Action Memo to authorize obligation of funds	Constantelos,USEPA	Adamkus,USEPA	Memorandum	102
	2	83/06/21	Administrative Inspection Warrant	Robert Cowles - IEPA		Pleadings/Orders	103

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	4	83/06/21	Affidavit of Robert K. Cowles	Robert K. Cowles - IEPA		Pleadings/Orders	104
	2	83/07/15	Administrative Inspection Warrant			Pleadings/Orders	104
	5	00/00/00	Press Release on Byron			Press Release	106
	2	86/05/09	EPA News Release re: EPA To Provide Water Filters for Byron Homes	USEPA		Press Release	107
	2	86/06/13	EPA News Release re: EPA Seeks Public Comment on Rock River Terrace Water Plans	USEPA		Press Release	108
	1	86/07/03	EPA News Release announcing extension of public comment period.	USEPA		Press Release	109
	1	86/07/24	IEPA News Release "IEPA To Cleanup Byron Salvage Yard".	Illinois EPA		Press Release	110
	9	00/00/00	Supplemental RI/FS Scope of Work			Reports/Studies	111
	75	00/00/00	Report on Disposal of Toxic Wastes at Byron	R.Piskin,IEPA		Reports/Studies	112
	4	76/00/00	Summary of Reports on Toxic Waste Disposal at Byron	R.Piskin,IEPA		Reports/Studies	113
	5	83/01/24	Preliminary Assessment	Shea-USEPA	file	Reports/Studies	114
	10	83/04/15	Community Relations Plan for Remedial Investigation and Feasability Study	IEPA		Reports/Studies	115
	25	83/07/00	Site Assessment and Emergency Action Plan	Weston-Sper	USEPA	Reports/Studies	116

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	110	84/04/27	Remedial Action Master Plan for Byron	CH2M Hill	USEPA	Reports/Studies	117
	202	84/06/00	Remedial Investigation Feasibility Assessment for Remedial Cleanup with Appendices	D'Appolonia Waste Mgt Services	Illinois EPA	Reports/Studies	118
	24	85/03/13	ROD Remedial Alternative Selection, No.1	Adamkus, USEPA		Reports/Studies	119
	131	85/12/00	QAPP for Preliminary Soil and Sediment Sampling	Camp Dresser & McKee	USEPA	Reports/Studies	120
	3	86/02/03	Scope of Work - Remedial Action Consulting Engineering Services	John Hooker - IEPA	J.Retzlaff-Donohue& Assoc.	Reports/Studies	121
	2	86/07/14	IEPA ROD, Removal Action (water)	Carlson, IEPA		Reports/Studies	122
	9	86/09/00	Phased Feasibility Study Community Relations Responsiveness Summary			Reports/Studies	123
	40	86/09/23	Record of Decision #2 Remedial Alternative Selection	Adamkus-USEPA Regional Admin		Reports/Studies	124
	2	86/09/24	IEPA ROD, Removal Action	Carlson, IEPA		Reports/Studies	125
	496	88/07/00	Remedial Investigation Report Volume I of II	Camp, Dresser & McKee	USEPA	Reports/Studies	126
	384	88/08/00	Remedial Investigation Report Addendum, Volume II of II	Camp, Dresser & McKee	USEPA	Reports/Studies	127
	129	89/02/00	Feasibility Study for Byron site with forwarding letter	CDM	USEPA	Reports/Studies	128
	20	89/02/21	Proposed Plan for Byron site	USEPA		Reports/Studies	129

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DATE	TITLE	AUTHOR	RECIPIENT	DOCUMENT TYPE
00/00/00	Comm Ed well data for several parameters 1976-1985	Comm Ed	USEPA	Sampling/Data
85/07/01	Analysis of soil samples for PCBs, pesticides and dioxins	CDM	USEPA	Sampling/Data
85/07/03	EP and toxicity analysis of soil samples 6-26-85 through 7-3-85	CDM	USEPA	Sampling/Data
85/07/03	Organics analysis of soil samples	CDM	USEPA	Sampling/Data
85/07/03	Metals analysis of soil samples	CDM	USEPA	Sampling/Data
85/08/22	Soil analysis results	USEPA		Sampling/Data
85/09/02	Analysis of 3 low water and 27 low soils for total metals and CN-			Sampling/Data
85/09/25	Pesticide and Organics analysis			Sampling/Data
85/10/10	Resubmitted Data Sheets for Organics Analysis			Sampling/Data
85/10/10	Organics analysis sheets for 8 water samples			Sampling/Data
85/10/21	Total metals and organics analysis of Byron Forest Preserve samples			Sampling/Data
85/10/22	Soil data inorganics analysis			Sampling/Data
85/10/22	Data from soil samples taken summer 85, Organics analysis			Sampling/Data
85/10/24	Inorganic Data from monitoring well analysis	CDM	USEPA	Sampling/Data
85/10/24	Inorganic data from	CDM	USEPA	Sampling/Data

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	monitoring wells			
85/11/08	Data from analysis of pitcher pump well PW-3			Sampling/Data
85/12/19	Analysis of 7 low water samples	CDM	USEPA	Sampling/Data
86/01/15	Analysis results of residential samples for cyanide			Sampling/Data
86/01/16	Water sample inorganic data			Sampling/Data
86/01/30	Water sample organic data			Sampling/Data
86/01/30	Organic Analysis Data Sheets			Sampling/Data
86/02/07	Analysis of 10 water samples for IFB metals & cyanide			Sampling/Data
86/02/12	Groundwater organics analysis			Sampling/Data
86/02/13	Organics analysis data sheets	Camp, Dresser & McKee	USEPA	Sampling/Data
86/06/26	Organics analysis data sheets			Sampling/Data
86/08/21	Inorganics, organics and total metals analysis 5-3-86 through 5-29-86			Sampling/Data
86/10/28	Comm Ed groundwater monitoring results from Byron station area April-August 86	Comm Ed	USEPA	Sampling/Data
87/09/01	Metals analysis of 13 water and 10 soil samples	CDM	USEPA	Sampling/Data
87/11/18	Cyanide analysis of 4 low water samples	CDM	USEPA	Sampling/Data

ACRONYM GUIDE FOR THE ADMINISTRATIVE RECORD
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ACRONYM	DEFINITION
Q.C.	Quality Control
QAPP	Quality Assurance Project Plan
RCRA	Resource, Conservation and Recovery Act
RI/FS	Remedial Investigation/ Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
SARA	Superfund Amendment and Reauthorization Act of 1986
TAG	Technical Assistance Grant
TAT	Technical Assistance Team
TCE	Trichlorethylene
USEPA	United States Environmental Protection Agency

ACRONYM GUIDE FOR THE ADMINISTRATIVE RECORD
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ACRONYM	DEFINITION
ATSDR	Agency for Toxic Substance and Disease Registry
CDM	Camp, Dresser & McKee
CEC	Commonwealth Edison Co.
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CORPS	United States Army Corp of Engineers
DLPC	Division of Land Pollution Control
DWPC	Division of Water Pollution Control
FPD	Forest Preserve District
FY	Fiscal Year
HRS	Hazard Ranking System
IEPA	Illinois Environmental Protection Agency
IPCB	Illinois Pollution Control Board
MOU	Memorandum of Understanding
NPL	National Priorities List
OSC	On Scene Coordinator
OSWER	USEPA Office of Solid Waste and Emergency Response
PCB	Polychlorinated Biphenyls
PRP	Potential Responsible Party

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DATE	TITLE	AUTHOR	RECIPIENT	DOCUMENT TYPE
87/12/03	RAS volatile compound analysis of 23 low soil samples			Sampling/Data
87/12/21	Metals and cyanide analysis of 4 low soil samples			Sampling/Data
88/01/27	Data from organic analysis of 35 soil, low and medium, and 3 water samples			Sampling/Data
88/02/24	VOA analysis of 40 sediment samples	CDM	USEPA	Sampling/Data
88/02/29	TOC,NO3-NO2, NH3, TSS and TDS analysis of water samples			Sampling/Data
88/04/00	Phase II Remedial Investigation, Sampling/ Data (Draft)	Camp, Dresser & McKee	USEPA	Sampling/Data

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TITLE	AUTHOR	DATE
OSWER Guidance Checklist	OSWER, USEPA	00/00/00
List of Guidance Documents for RPM Activities during Responsible Party Onsite Response		00/00/00
Evaluation of groundwater remediation techniques for fractured bedrock using aquifer response tests		87/08/12

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22	05/06/00	Work Plan Memorandum	Camp Dresser & McKee	USEPA	Reports/Studies
89	05/06/00	Work Plan	Camp Dresser & McKee	USEPA	Reports/Studies
13	05/11/00	Supplemental QAPP for Contingency Drilling and Well Installation Activities for Byron	Camp Dresser & McKee	USEPA	Reports/Studies
114	06/05/00	Monitoring Wells and Geophysics QAPP		USEPA	Reports/Studies
10	06/05/00	Supplemental Work Plan for Byron	Camp Dresser & McKee	USEPA	Reports/Studies
110	06/06/00	Phased Feasibility Study for Byron	Camp Dresser & McKee	USEPA	Reports/Studies
115	06/10/03	Health and Safety Plan for Remedial Action at Byron Salvage Yard	Chem. Waste Mgt.-ENRAC Div.	IEPA	Reports/Studies
173	06/10/09	Operations Plan for Remedial Action at Byron Salvage Yard	Chem. Waste Mgt.- ENRAC Div.	IEPA	Reports/Studies
90	07/04/00	Work Assignment Amendment	Camp Dresser & McKee	USEPA	Reports/Studies
71	08/05/00	Alternatives Array for Byron	Camp, Dresser & McKee	USEPA	Reports/Studies